DOCUMENT RESUME

ED 191 418 HE 013 115

TITLE	Allied Health Education in Texas: Guiding Concepts for the '80s. CB Study Paper 29.
INSTITUTION	Texas Coll. and Univ. System, Austin. Coordinating Board.
PUB DATE	Apr 80
NOTE	70p.
AVAILABLE FROM	Coordinating Board, Texas College and University System, P.O. Box 12788, Austin, TX 78711
EDRS PRICE	MF01/PC03 Plus Postage.
DESCRIPTORS	*Accreditation (Institutions): Allied Health Occupations: *Allied Health Occupations Education: *Certification: College Planning: Educational Assessment: *Educational Planning: Guidelines: Higher Education: Occupational Mobility: Position Papers: Professional Continuing Education: *Statewide Planning
IDENTIFIERS	*Texas

ABSTRACT

Recommendations designed to form a framework for the planning, evaluation, and development of allied health education programs in Texas colleges and universities are presented. The recommendations are based on a year of study by an advisory committee on the proliferation of allied health disciplines and programs, increasing specialization, credentialing of allied health personnel, career mobility, accreditation, and continuing education and retraining. Recommendations on these issues are directed both to educational institutions and to the Coordinating Board. A summary of the recommendations, discussions of the subcommittees' findings on each of the study areas, and the rationale for the recommendations are presented. Appended materials include a glossary, a proposed process for review of allied health proposals, and an example of an inventory for allied health professions. (SW)

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ALLIED HEALTH EDUCATION IN TEXAS

Guiding Concepts for the '80s

CB Study Paper 29

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HE 013 115

Coordinating Board, Texas College and University System
Austin, Texas . April 1980

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FOREWORD

In recent years the number and types of allied health education programs in Texas have burgeoned rapidly. Increasingly sophisticated technologies in health care have led to greater specialization among allied health personnel, and job opportunities have continued to expand. As a result, strategies for assuring that the most effective and efficient training will be available to meet the needs of this growing market are of critical importance to the welfare of the state and its citizens.

Numerous concerns have been expressed by the Coordinating Board and others over the need to examine the impact of these factors on allied health training at both the state and institutional levels.

For this reason, I appointed an Allied Health Education Advisory Committee in February 1979, with Charles C. Sprague, M.D., president of The University of Texas Health Science Center at Dallas, as chairman. The committee was asked to address the proliferation of allied health disciplines and programs, increasing specialization, credentialing of allied health personnel, career mobility, accreditation, and continuing education and retraining.

After a year of study of these perplexing and difficult issues, this distinguished group of leaders in the health professions recommended to the Board a framework for the planning, evaluation, and development of allied health education programs in Texas colleges and universities. Its final report was presented to and accepted by the Board in April 1980.

The Coordinating Board and its staff express appreciation to the Allied Health Education Advisory Committee for this important contribution, to be used as guidelines for the coordination of allied health education.

KENNETH H. ASHWORTH
Commissioner of Higher Education

CONTENTS

Advisory Committee i

Introduction iii

Chapter I. Recommendations 1

Chapter II. Proliferation of Allied Health Disciplines and Programs 11

Chapter III. Credentialing of Allied Health Personnel 21

Chapter IV. Career Mobility 29

Chapter V. Accreditation 39

Chapter VI. Continuing Education and Retraining 43

Appendices

A. Glossary 57

B. Proposed Process for Review of Allied Health Proposals 61

C. Example of an Inventory for Allied Health Professions 65

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INTRODUCTION

"Now this is not the end. It is not even the beginning of the end. But it is, perhaps, the end of the beginning."

--Winston Churchill, November 10, 1942

The number of requests reaching the Coordinating Board from Texas public senior colleges, universities, and health science centers to establish new allied health education programs continues to grow. At the same time, many public community colleges, through the Texas Education Agency, are increasing the number and kinds of training programs for allied health personnel.

The accelerated interest in allied health education programs, in the entire nation as well as in Texas, is not unexpected. These programs train an important part of the health care team, since the greatest number of personnel needed to assist in the delivery of quality health care are allied health professionals. And in a declining job market for many graduates of our higher education institutions, employment opportunities in allied health fields continue to flourish.

There is a demonstrated need to provide entry-level job training in the health professions and to upgrade skills and professional competence through formal educational programs.

Additional incentives provide impetus to the development of these programs. Recruiting and training students to meet an expanding job market is attractive to educational institutions. If enrollments decline, one way for an institution to reverse that trend is to offer educational programs to complement the existing job market. Allied health programs do that.

In addition, on formula funding, allied health programs generate substantial appropriations for instructional purposes. These programs are expensive

to offer, especially in a time of tight money and prolonged periods of spiraling inflation. Appropriations for such programs may not in reality cover total institutional costs, but in the past they have sometimes provided sufficient benefits through categorical federal funding sources to encourage institutions to initiate programs.

Allied health programs have increased in number because they are needed, because they attract students, and because they may offer financial incentives.

However, serious concerns are raised by the growing number of narrow specializations at all degree levels, the requirements of some professional groups for higher levels of training for the professional entry credentials, difficulties with transfer of credit to implement the career ladder concept, and often limited opportunities for both lateral and upward career mobility.

Other questions that arise in the review process for new allied health programs concern the most appropriate institutional setting for certain kinds of training, the most appropriate level of training for various kinds of allied health personnel, and the differences in programs needed to prepare practitioners, master clinicians, teachers, researchers, and managers.

Allied Health Education Advisory Committee

To address these and other problems in the planning and provision of allied health education in Texas, the Commissioner of Higher Education appointed in February 1979 an Allied Health Education Advisory Committee, chaired by Dr. Charles C. Sprague, President, The University of Texas Health Science Center at Dallas.

Membership of the committee was structured to represent community colleges, senior colleges, universities, and health science centers, and selected professional and governmental organizations, including the Texas Education

Agency, the Texas Medical Association, the Texas Osteopathic Medical Association, the Texas Dental Association, and the Texas Hospital Association. The 19 members (two of the appointees resigned early in the study) were asked to investigate the proliferation of allied health programs and fields, career mobility, and continuing education and retraining. They were charged with bringing recommendations to the Coordinating Board to establish guidelines for addressing these problems.

It was understood that the Advisory Committee would not address the supply and demand of allied health personnel and would not undertake research necessary to determine specific kinds or numbers of allied health personnel needed to serve the state's health care delivery system.

Objectives of the Report

The primary objective of the Advisory Committee was to produce a framework for orderly planning in allied health education, which is essential in these rapidly changing, highly technical fields of endeavor.

Therefore, the purpose of the committee was to identify certain essential guidelines and principles that would provide the framework within which specific studies and conclusions could be derived as proposals and problems are received by the Coordinating Board for action.

The committee was convinced that, in the health field, it is absolutely crucial to establish a mechanism whereby educational institutions, practitioners, employers, and state agencies, through combined and cooperative efforts, may study and work to improve the preparation of allied health professionals. None of these entities working alone can be successful in this endeavor.

Winston Churchill, at a critical turning point in World War II, said: "Now this is not the end. It is not even the beginning of the end. But it

is, perhaps, the end of the beginning."

In this sense, the Advisory Committee's report provides a set of guiding concepts as a beginning point for planning and action in allied health education in Texas in the '80s.

CHAPTER I

RECOMMENDATIONS

During the past ten years the number of allied health education programs offered by colleges and universities increased sharply. The demand was high, governmental and private agencies recognized the need, funds and prospective students were available, and educational institutions were encouraged to develop programs to meet escalating demands for health workers.

Now, however, consumer demand for better and expanded health care must be considered in the light of an even greater demand by taxpayers for economic accountability and budget reductions. It appears that both state and federal funds available for new programs will be limited. These conditions mandate that educational institutions and agencies of this state must proceed with caution in developing planning efforts for assuring continued quality programs which best meet the needs of all concerned: consumers, educational institutions, and allied health professionals.

Three concerns should be a part of the consideration of any aspect of allied health education. The first, and most important, concern is providing adequate access to quality health care for the citizens of the state. A second concern is providing educational programs for qualified individuals who wish to enter health care fields. The third concern is, of course, providing and maintaining competent personnel prepared to meet the needs of the health care industry itself.

Intensifying these concerns, the Medicaid and Medicare amendments to the 1935 Social Security Act created a spiraling need for health workers as the federal government became the largest purchaser of health care services in the country. Allied health education institutions have been given the tremendous responsibility to develop adequate supplies of qualified health workers.

At the same time, issues such as changing attitudes toward work, population shifts, declining enrollments, vacillating support to allied health education, expanding role expectations, and many other variables tend to complicate the development of adequate manpower resources. Consequently, when reviewing the issues related to allied health education, it is not possible to isolate the issues of society, consumerism, public policy, and health care in general.

The Allied Health Education Advisory Committee to the Coordinating Board, in its consideration of these concerns and specific issues raised by Dr. Kenneth H. Ashworth, Commissioner of Higher Education, divided itself into a number of study subcommittees: Proliferation of Allied Health Disciplines and Programs, Increasing Specializations, Allied Health Credentialing, Accreditation, Career Mobility, and Continuing Education and Retraining. Out of the deliberations of these subcommittees came recommendations, directed both to educational institutions and to the Coordinating Board.

A summary of those recommendations, approved by the full membership of the Advisory Committee, follows. Discussions of the subcommittees' findings and the rationale for the recommendations are presented in subsequent sections of the report.

SUMMARY OF RECOMMENDATIONS

I. Recommendations to Institutions. These recommendations are addressed to educational institutions, with the intent that the Coordinating Board should encourage implementation to the extent of its statutory authority.

1. The level, length, and institutional setting of allied health programs must be based on institutional strengths and the competencies needed and utilized in the health care delivery system.

Justification of level and length of programs is of primary importance when different degrees are available for the same entry-level occupational preparation. Justification for advanced training and/or degrees must be based primarily on demonstrated need and institutional ability to provide training for master clinicians, teachers, managers, and researchers. The intent should be to provide pluralistic ways to accommodate needed career mobility, but not to overtrain students for the available job market. (pp. 12-13, 22, 25)

2. Institutions should be encouraged to use the specific knowledge, skills, and essential functions, required to respond effectively to the needs of the job market, in developing educational programs, especially to avoid over- or undereducating students. (pp. 14, 22)

3. Primary emphasis should be placed on training at the associate degree and certificate levels. For the most part, the advanced degrees should be largely for leadership and as a basis for upward mobility for those desiring academic careers. Although this recommendation is not optimal, it is believed to be realistic. (p. 22)

4. Continuing education or short-term retraining courses, where possible, or specialty modules or "tracks" within existing programs are the preferred means to upgrade the skills and knowledge of practitioners, rather than the creating of new degree or certificate programs or disciplines. (p. 16)

5. All institutions providing or planning allied health education programs should have an institutional master plan for allied health

education, including present activities as well as development plans for a five-year period. (p. 18)

6. To minimize proliferation of health disciplines and programs, consideration should be given by educational institutions to consolidating all allied health education programs under a single administrative unit. (p. 17)

7. Each institution should have an advisory committee for each allied health program. An external advisory committee for each program within each institution should participate in the planning and operation of existing and projected allied health programs at the college or university. (p. 17)

8. Institutions should support efforts to identify, early in a program, those students who are capable of providing leadership and to facilitate their preparation to accept this role in education, planning and managing health care delivery systems, clinical practice, and investigations and research. (p. 23)

9. Institutions, on a selective basis, should be permitted to provide academically sound course offerings at times and sites that would accommodate students who could not otherwise participate in such educational offerings under conventional circumstances. (p. 32)

10. Selected institutions should be encouraged to develop multi-disciplinary programs that will enable individuals to perform multiple tasks and fulfill more than one occupational role, particularly to serve the needs of small health care facilities in remote areas. (p. 23)

11. Multiple entry-exit programs, including but not restricted to those tnat already have been developed and approved by the Coordinating Board, should be expanded and/or implemented. (pp. 16, 36)

12. Duplicative learning experiences should be minimized through improved means of validating competency, so credit and advanced standing may be given for appropriate portions of the training programs. (p. 23)

13. Career mobility should be emphasized in planning all allied health degree programs. Specific career mobility objectives should be stated in all new program proposals. In addition, criteria of planning for career mobility should be used in evaluating existing programs. The educational process should emphasize appropriate competency-based educational concepts. (p. 33)

    13.1 A main feature of career mobility should be development of broad-based degrees, with related program specializations being developed as majors within the broad degree, rather than as distinctly separate degrees.

    13.2 A vital component of career mobility should be common sets and subsets of knowledge for as many programs as possible.

14. The following educational pathway is outlined as best suited to maximizing career mobility: (p. 34)

    14.1 The certificate level, below the associate degree, should provide basic marketable skills and job-entry proficiencies.

14.2 The associate degree should provide competency in most allied health technology programs. This level usually consists of a balance between psychomotor and cognitive skills. In some fields, supervisory and management skills are included.

14.3 The baccalaureate degree should provide more theoretical preparation as well as supervisory or leadership training. This usually is the minimum level for those who serve as teachers. Baccalaureate programs, where possible and appropriate, should build upon associate degree and/or certificate programs.

14.4 Master's level programs would provide advanced competencies beyond the baccalaureate level in such areas as education, research, administration, and clinical practice as needed to maintain an adequate supply of competent individuals to carry out functions in these areas.

14.5 Doctoral level programs would provide opportunities for that limited number of persons who are qualified to develop advanced competencies in research, planning, educational, and supervisory activities as needed to maintain an adequate supply of competent individuals to carry out functions in these areas.

15. Educational institutions approved for basic allied health education programs should assume the major responsibility for providing continuing education programs for practitioners in those fields. (p. 41)

16. Educational institutions providing continuing education programs should be encouraged to adopt the National University Extension Association definition of continuing education units (CEU) as the mechanism for giving recognition of participation. Institutions providing continuing education should maintain accurate student records of such units earned. (p. 48)

II. Recommendations to Coordinating Board. The following recommendations address issues within the statutory authority of the Coordinating Board.

17. The Coordinating Board program review process should be adapted to be more responsive to the unique characteristics of allied health education. (pp. 14, 24)

17.1 A permanent Allied Health Education Advisory Committee should be established. The committee should be advisory in nature, working with the staff in making recommendations to the Coordinating Board regarding allied health education. A description of a suggested committee, its makeup, and its specific functions is given in Appendix B. (pp. 14, 24)

17.2 The Coordinating Board's Guidelines, Procedures, and Criteria Relating to Requests for Administrative Changes and New Degree Programs should be expanded to include questions pertaining specifically to the development of allied health educational programs. (p. 18)

17.3 Mechanisms to evaluate proposed programs should be broadened. This evaluation should consider, among others, adequacy of

clinical facilities utilized in the practicum, the appropriateness of the affiliation agreements, meeting accreditation standards, and the need for health professionals in the geographic area of the proposed program. (p. 24)

17.4 The educational institution should be responsible for the total educational program, including didactic and clinical learning. The educational institution offering the didactic portion of an allied health program should be responsible for the total education to ensure better integration of didactic and clinical education and sufficient breadth of clinical experiences. (p. 18)

17.5 Institutions should prepare and submit with each proposal a statement of how the program interfaces with the master plan for allied health education at that institution. (p. 18)

17.6 A planning process for proposal preparation should be developed. The Coordinating Board staff should make available, upon request by the institution, staff advisory assistance for program proposal planning and development. This advisory service would be prior to and separate from the approval/disapproval review process which would follow submission to the Coordinating Board of a program proposal. (p. 18)

17.7 Proposals for new programs should include not only information on the accreditation process for the particular discipline, but also documentation of communication with the accrediting body. (p. 19)

18. The Coordinating Board should establish a system for periodic review of all allied health education programs. (p. 24)

19. The Coordinating Board should support research to provide information on programs, students, and service needs to facilitate rational planning for the preparation of appropriate and needed manpower. (p. 25)

20. Problems associated with the proliferation and unrealistic standards of accrediting bodies for allied health education programs should be addressed by the Coordinating Board. Appropriate action should be taken to establish a statewide position, make recommendations, and share the state's position with other states and with national accreditation agencies. (p. 41)

    20.1 The Coordinating Board should sponsor a statewide meeting of representatives from institutions involved in offering or supporting allied health education requiring evaluation by professional accreditation bodies. The purpose would be to identify priorities of statewide accreditation-related concerns.

    20.2 The Coordinating Board should develop ways and means of establishing channels of constructive communication with national accrediting agencies regarding resolution of these issues.

21. Standards should be applied to assure quality continuing education programs. Approval of educational institutions to provide continuing education should be based on documentation that standards are met. (p. 46)

Broadly based representative groups should determine and monitor these standards by means of mechanisms such as continuing education advisory committees.

22. Stable sources of state funds should be developed to share the costs of continuing education and retraining programs. (p. 49)

23. The Coordinating Board should develop a process of registration and review and should set standards for out-of-state institutions' proposed continuing education offerings in allied health. (p. 46)

CHAPTER II

PROLIFERATION OF ALLIED HEALTH DISCIPLINES AND PROGRAMS

Proliferation, as defined in this report, includes two distinct but related aspects: disciplines and programs.

Proliferation of disciplines means to separate identified job functions and educational preparations from already existing, broader classifications. For instance, training for a nuclear medicine technologist may be an offshoot of an existing program for the preparation of radiologic technologists.

Proliferation of programs means the initiation of already defined and recognized programs in additional institutions.

Both types of growth result in the creation of more educational programs. Proliferation of disciplines may be necessary to prepare health professionals who can respond to changing needs within the health care delivery system. Such disciplines, however, must be well defined and evaluated before they are initiated as a separate degree. A proliferation of job titles and/or the extraction of certain tasks and functions from existing specialties do not provide sufficient grounds for adding new disciplines. New disciplines or specializations must be based on documented need to provide instruction in a unique or distinct new body of knowledge or the application of new technology.

Increased understanding of the health care system as a dynamic complex of interacting and interdependent parts with changing relationships is important. Without such an understanding, planning efforts may be misdirected or disruptive. Articulation must be improved within and between existing and proposed allied health programs. Programs must be based on institutional ability to provide financial support, appropriate resources, a sound curriculum, among other factors. There must be evidence that an institution understands

the extent of resources which are needed to develop quality programs. Strong institutional commitments to the quality of instruction backed by financial and clinical resources are critical.

Selection of Educational Setting

The selection of the appropriate educational agent -- hospital, community/junior college, university, or health science center -- will depend upon such factors as available and committed faculty, financial and clinical resources, commitment of the institution, prevailing practice, existing regulations, job requirements, and the availability of qualified administrators to adequately plan, implement, conduct, and evaluate the quality of the health care educational program.

The proliferation of health disciplines and programs presents distinct challenges to educators, employers, and those individuals prepared in programs for which employment opportunities may not exist. It is essential that additional programs be authorized only after thorough study and planning for a number of reasons: the necessary lead time to train health care professionals, cost factors, non-transferability of training to other career fields, potential obsolescence due to new technology, and the short career-life of many practitioners. Such planning must include sufficient time and resources to ensure that questions of need and institutional capability are addressed and resolved.

Personnel Requirements

Since need and institutional capability are the two essential criteria for determining program approval, it is necessary to define need. As used in this report, the term need is a function of the present and projected personnel

requirements of the health care system in Texas. Thus, the major basis of need for additional allied health programs and disciplines is the job market.

The predicate for this definition of need is clear, but it bears restating: the expenditure of public tax funds for educational programs in any occupational area is a matter of public policy directed at meeting a public need that cannot or will not be met otherwise. Student interest is not the major concern for expenditure of public tax funds for an occupational training program.

In addition, programs in the same allied health discipline should generally have the same credential level for job-entry. It should be the responsibility of the sponsoring educational institution to demonstrate justification for program level differences.

New Technologies

Although restrained creation of new health disciplines and programs has been advised by many organizations, the proliferation of health disciplines has occurred because of rapid increases in knowledge in the health professions. As this knowledge is incorporated into a health care delivery system, new technologies emerge which require additional educational preparation. It is the responsibility of educational institutions to prepare health care practitioners who have up-to-date skills and abilities.

Since there are both economic and ethical imperatives for maximizing the use of health manpower, guidelines for the development of new or expanded health occupations should require documentation of the need and scope of duties of the new or expanded occupation. The extent to which existing health programs may fulfill the proposed job should be given high priority before initiation of any new occupational fields. Decision-making regarding occupational and health

program growth must be based on criteria that distinguish between demonstrated job market needs and demands and the pressures of discipline-based professional groups.

Two concerns compound the problem: first, the lack of valid data regarding the cost of programs, and second, the lack of reliable, comprehensive information on need. Under Department of Health, Education and Welfare guidelines, the Governor has designated the Texas Department of Health as the agency to collect and disseminate data for health planning. Unfortunately, adequate statewide data upon which to make proper decisions are not yet available.

Educators, practitioners, and employers should be involved in the proposal review process for new or expanded programs and disciplines. The committee believes the best way to add their expertise to the review process, while maintaining the state agency's statutory role of responsibility and approval, is through an advisory committee to the Coordinating Board staff. (See Appendix B for elaboration.)

Task Inventories

Criteria must be developed to determine when development of new disciplines is appropriate and necessary. Task inventories provide one useful tool to determine areas of overlap or duplication between existing and proposed new educational disciplines. The use of task inventories or analyses provides one objective means for improving the utilization of existing health personnel, since the technique of preparing task inventories relies on uniform definitions and measurable units of learning required for mastery.

Development of task inventories requires reduction of a variety of tasks to factors which can be clustered into groups according to measurable similarities in the competencies required to perform them. Occupations also are

grouped into "families" based on their constituent skill and competency elements. (See Appendix C.)

Task inventories have been developed and validated for most recognized health occupations through an HEW contract with the University of California at Los Angeles, and other government-sponsored contracts.

The use of task analyses and other similar methodologies in the program review process can help ensure compatability between job-required competencies and allied health education programs.

Inappropriate Utilization of Workers

Another aspect of the proliferation problem is the inefficient or inadequate utilization of health care workers. This results in higher costs for patients and often decreased morale among health care workers. Several factors prevent optimal utilization of health care professionals. One important barrier is specialization within health care fields, coupled with the separation among many types of health care professionals. This may also be reinforced by professional organizations, by separate educational facilities, and by outdated laws and customs.

Poor utilization of health care professionals adds to problems of high turnover rates, job dissatisfaction, higher operating costs, friction among health occupations, and unfulfilled work expectations.

One partial remedy for this unsatisfactory situation is continuing and upgrading education. Many active practitioners do not require de novo training, and yet, in the absence of readily available training for redefined jobs, many find their options limited to undergoing complete retraining and attendant licensure. The current situation often results in undue pressures and incentives for educational institutions to create completely new programs, for this may be

the only available avenue to secure the necessary funds to successfully mount such costly programs. The committee believes that appropriately designed continuing education courses could help alleviate these problems. Continuing education, advocated in Chapter VI, is characterized by the same level of course rigor and quality as that found in formal credit courses. All the advantages customarily attributed to continuing education would apply.

Career Mobility

Other changes in the utilization of health manpower can be made. Entry standards for positions can be changed. The health care occupational hierarchy can be restructured to encourage and support both upward and lateral career mobility. Among other means, this can be achieved through providing more efficient transfer of course credit, perhaps based on task inventories and multiple entry-exit type educational structures. Knowledge and competencies which are basic to several health careers can be isolated and offered as foundation courses. Students may then "test the water" for a time and choose from among several educational/career options. These and other changes can be effected to provide viable alternatives to the proliferation of additional programs.

Changes can be implemented when commitment is strong. Any change will have a direct impact on the quantity and variety of health programs developed to meet the manpower needs of the health industry over the next several decades. Current and projected increases in demand for health services will result in a parallel need for additional health care professionals. Educational institutions also must be prepared to respond to further demands created by prospective national health policies.

Finally, the committee believes that expansion in health education programs can be managed more effectively if ties are further strengthened

between the two program approval agencies in Texas -- the Coordinating Board and the Texas Education Agency. Their efforts toward cooperation and articulation are commended, and they should be encouraged to build upon and improve these strengths.

Recommendations

The following recommendations address the problem of proliferation of both disciplines and programs in allied health education:

1. Continuing education or short-term retraining courses, where possible, or specialty modules or "tracks" within existing programs are the preferred means to upgrade the skills and knowledge of practitioners, rather than creating new degree or certificate programs or disciplines.

2. To minimize proliferation of health disciplines and programs, consideration should be given by educational institutions to consolidating all allied health education programs under a single administrative unit.

3. Each institution should have an advisory committee for each allied health program. An external advisory committee for each program within each institution should participate in the planning and operation of existing and projected allied health programs at the college or university.

4. The Coordinating Board program review process should be adapted to be more responsive to the unique characteristics of allied health education.

   4.1 A permanent Allied Health Education Advisory Committee should be established. The committee would be advisory in nature, working with the staff in making recommendations to the Coordinating Board regarding allied health education. A description

of a suggested committee, its makeup, and its specific functions is given in Appendix B.

4.2 The Coordinating Board's Guidelines, Procedures, and Criteria Relating to Requests for Administrative Changes and New Degree Programs should be expanded to include questions pertaining specifically to the development of allied health educational programs.

4.3 Mechanisms to evaluate proposed programs should be broadened. This evaluation should consider, among others, adequacy of clinical facilities utilized in the practicum, the appropriateness of the affiliation agreements, meeting accreditation standards, and the need for health professionals in the geographic area of the proposed program.

4.4 The educational institution should be responsible for the total educational program, including didactic and clinical learning. The educational institution offering the didactic portion of an allied health program should be responsible for the total education and sufficient breadth of clinical experiences; however, they must share the responsibility for planning, management, implementation, and evaluation with their clinical affiliates.

4.5 Institutions should prepare and submit with each proposal a statement of how the program interfaces with the master plan for allied health education at that institution.

4.6 A planning process for proposal preparation should be developed.

The Coordinating Board staff should make available, upon request by the institution, staff advisory assistance for program proposal planning and development. This advisory service would be prior to and separate from the approval/disapproval review process which would follow formal submission to the Coordinating Board of a program proposal.

4.7 Proposals for new programs should include not only information on the accreditation process for the particular discipline, but also documentation of communication with the accrediting body.

CHAPTER III

CREDENTIALING OF ALLIED HEALTH PERSONNEL

Credentialing is a mechanism involving a set of standards by which there is evaluation of competence of the practitioner. As one means of protecting the public from an unqualified, poorly prepared practitioner, it may be achieved by several mechanisms: licensure, registry, certification, and academic certificates and degrees. This report is concerned with college and university-based training programs terminating in certificates and degrees.

The length of training for the allied health professional is of economic importance to the individual seeking training, to the educational institution and to the public. Longer periods of training frequently result in a higher level of credential, higher pay at career entry, and ultimately, higher cost of health care to the consumer. There is a trend in the allied health professions to increase the period of study required for career entry. For example, an increase from a baccalaureate to a post-baccalaureate credential has been recommended for entry into the physical therapy profession. In other fields, employed practitioners performing similar tasks may be credentialed at different levels. Respiratory therapy has credentials at certificate, associate degree, and baccalaureate levels.

Shortest Training Period

In the recently completed report* of the National Commission on Allied Health Education, funded by a W. K. Kellogg Foundation grant to the American Society of Allied Health Professions, it was recommended that "accreditation

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*To be published as The Future of Allied Health Education: Alliances for 1980s, The Report of the National Commission on Allied Health Education, Jossey-Bass Inc., Publishers, 433 California Street, San Francisco, CA 94104.

agencies and other organizations involved in setting standards for allied health education programs should be able to justify the level and length of educational programs on the basis of competencies needed and utilized in the delivery of service."

Highly trained individuals performing routine tasks with little opportunity for decision-making often become dissatisfied. If they leave their field, or are not productive, the time and money expended by the individual and the tax-paying public is lost. Thus, it is important that the training program prepare the practitioner to meet the demands of the job. Allied health training programs must educate individuals who can meet standards of performance objectives, be articulate, and have the capability to adapt to changing health service needs. These objectives should be met in the shortest training period consistent with the training of a competent practitioner.

The committee recommends that, as a general guideline, when programs for a given occupation lead to varying levels of credentialing, students be trained at the lower level if half or more of the programs nationally are at the lower level. If higher level programs are offered, it must be clearly demonstrated that higher levels of skill and knowledge are needed and that these practitioners are utilized differently. This should be validated by task analysis and studies of functions and competencies necessary to perform. Funding of higher level programs is justified for occupations in which degrees are required for practice.

In general, the committee believes education for career entry in most allied health disciplines can be done at a sub-baccalaureate level -- associate degree or certificate. The purpose of baccalaureate and graduate programs primarily should be to provide training for master clinicians, teachers, managers, and investigators.

Effective Counseling Needed

Programs educating allied health practitioners should be encouraged to provide effective career counseling. Students exhibiting leadership potential should be identified early in the course of study and be counseled concerning available career opportunities in education, research, management, and as master clinicians. The counseling program should assist the student with course selection to facilitate preparation for areas of specialization and for leadership.

Multiple ways to arrive at career goals which allow for lateral and upward mobility should be encouraged. Course credit or advanced standing should be granted for demonstrated competence gained through other than traditional academic programs. For example, individuals who have worked in a field for years, who have no formal training, should be given course credit upon demonstration of competency by valid practical and/or written examinations.

Transfer of Credit

Efforts should be made to assure transfer of credits among colleges and universities in the state. This should eliminate unnecessary repetition of course work and prolongation of the course of study. Individuals having an associate degree in a field generally should be able to complete a baccalaureate degree in the same field of specialization in two additional years at a senior college or university.

Multidisciplined Health Professional

There is a distinct need for health professionals trained in multiple disciplines. This need is most acute in small health care facilities, especially in rural areas, where work load and economics may not allow employing credentialed practitioners in each field. The need is customarily met by using

"on-the-job trained" personnel. Thus, one individual may be functioning at present as the x-ray technician, laboratory technician, and electrocardiographic technician with no formal training in the three fields. Individuals formally trained in multiple disciplines to perform the limited number of procedures required in a small institution would be cost-effective and more competent. Pilot programs training practitioners in multiple disciplines should be funded. These programs should be located in colleges and universities in areas demonstrating potential need.

Advisory Committee Recommended

The Coordinating Board receives multiple requests for new allied health programs and for programs at higher credentialed levels. It is recommended that institutions proposing such programs should submit a document clearly demonstrating an on-going need for practitioners in the area, the adequacy of the clinical facilities used in the practicum, appropriate affiliation agreements with the clinical facilities and evidence that accreditation standards can be met. It is recommended that an advisory committee be appointed to review programs for need and/or merit and give written comments to the staff based upon their findings. The advisory committee should include educators, practitioners, physicians or dentist specialists in the field, and employers. This balance will prevent self-serving decisions.

On-going programs should be reviewed periodically (e.g., every five years). As part of the periodic review, there should be documentation of the continuing area need for practitioners, the adequacy of clinical facilities utilized in the practicum, and appropriateness of affiliation agreements with the clinical facilities. The report should document annually for each year under review the number of students making application to the

program, the number of students admitted to the program, the number of students graduated, any major curriculum changes, success of graduates on national certifying examinations, number of graduates employed in the discipline following graduation, number of graduates leaving the field, and the number of graduates pursuing specialization.

The committee recommends that the Coordinating Board establish criteria to be used in determining approval or disapproval for continuation of programs. On-going programs not meeting these criteria should be phased out. It is recommended that the advisory committee be used in the review of on-going programs.

Length of Preparation

Institutions requesting an increase in the length of preparation for entry level should be required to justify the change. Documentation of the specific need for extended preparation is a major part of this justification. Such programs should also be justified by health service need. Emphasis, whenever possible, should be placed on a continuance of learning, utilization of retraining, and continuing education rather than extension of the entry-level preparation.

There is definite need for more data, both regional and statewide, concerning existing programs, student and health service needs. Lack of such data precludes rational planning to meet manpower needs. Financial support of on-going research on the projected need for professionals in the various allied health fields and identification of the geographic areas of need is of critical importance. Allied health professionals, like other professionals, tend to remain in the geographical area where they are trained. It is extremely important, therefore, that programs be developed in colleges and

universities in areas of need and that necessary research to determine this need be supported.

Recommendations

To provide guidelines for reviewing new program proposals, reevaluating existing programs, determining length and level of programs, and assuring quality allied health education, the following recommendations are made.

1. The level, length, and institutional setting of allied health programs must be based on institutional strengths and the competencies needed and utilized in the health care delivery system. Justification of level and length of programs is of primary importance when different degrees are available for the same entry-level occupational preparation. Justification for advanced training and/or degrees must be based primarily on demonstrated need and institutional ability to provide training for master clinicians, teachers, managers, and researchers. The intent should be to provide pluralistic ways to accommodate needed career mobility but not to overtrain students for the available job market.

2. Institutions should be encouraged to use the specific knowledge, skills, and essential functions required to respond effectively to the needs of the job market in developing educational programs, especially to avoid over- or undereducating students.

3. Primary emphasis should be placed on training at the associate degree and certificate levels. For the most part, the advanced degrees should be largely for leadership and as a basis for upward mobility for those desiring academic careers. Although this recommendation is not optimal, it is believed to be realistic.

4. Institutions should support efforts to identify, early in a program, those students who are capable of providing leadership and to facilitate their preparation to accept this role in education, planning and managing health care delivery systems, clinical practice, and investigations and research.

5. Selected institutions should be encouraged to develop multidisciplinary programs that will enable individuals to perform multiple tasks and to fulfill more than one occupational role, particularly to serve the needs of small health care facilities in remote areas.

6. Duplicative learning experiences should be minimized through improved means of validating competency, so credit and advanced standing may be given for appropriate portions of the training programs.

7. The Coordinating Board program review process should be adapted to be more responsive to the unique characteristics of allied health education, and should include the appointment of a permanent Allied Health Education Advisory Committee (see Chapter II).

8. Mechanisms to evaluate proposed programs should be broadened. This evaluation should consider, among other factors, adequacy of clinical facilities utilized in the practicum, the appropriateness of the affiliation agreements, meeting accreditation standards, and the need for health professionals in the geographic area of the proposed program (see Chapter II).

9. The Coordinating Board should establish a system for periodic review of all allied health education programs. Programs no longer meeting established criteria should be phased out.

10. The Coordinating Board should support research to provide information on programs, students, and service needs to facilitate rational planning for the preparation of appropriate and needed manpower.

CHAPTER IV

CAREER MOBILITY

A major problem in the allied health profession is the lack of opportunities for career mobility, both up the career ladder to higher positions of competency and responsibility and laterally into a different technical field.

In general, structured educational paths for the preparation of allied health teachers, supervisors, administrators, master clinicians, and other leaders are limited in numbers and often are in geographic locations not readily accessible to many allied health professionals. At present, most leadership personnel come from other fields or by way of advancement on the job. While career levels do exist in most technological programs, these are not consistently recognized in a manner to support career mobility. There is little collaboration among institutions offering allied health education programs; articulation among institutions and programs is difficult.

For this reason, many programs offer free-standing degrees in specialized areas with little or no provision made for either upward or lateral mobility. Standardization of curricula and interinstitutional cooperation are lacking.

There are numerous advantages of planning for structured career options leading to upward mobility and providing for multiple entry points as well as for lateral mobility.

A number of models or concepts exist that can be and have been utilized in educational institutions. Among these career mobility models are the following:

1. Two plus two (AS-BS) - a type of multiple entry-exit program which offers basic allied health education in the first two years and advanced education in the last two years. Students may enter the job market at the end of the first two years and return later to complete the last two years if they wish.

2. Continuing education - organized short-term workshops, seminars, and the like which may carry CEU (continuing education unit) credit but which do not carry academic credit.

3. Master's/doctoral programs - graduate programs in such areas as allied health administration, education, or research designed for persons who have completed undergraduate work in a clinical or technical allied health field.

4. Lattice programs - programs which incorporate two or more levels of training in two or more distinct but usually related allied health fields. Students may move from one level to another, or from one field to another with relative ease. Core curricula are an integral and required component of lattice programs.

5. Mobile programs - entire, self-contained programs offered in different locales on a rotating basis.

6. Non-traditional, more accessible programs - programs which offer courses at times and locations more convenient to working allied health professionals and which make provisions for part-time students.

7. Multiple entry-exit programs - programs which incorporate two or more levels of training in the same field, with provisions for student entry or exit at each level.

8. Programs with specific articulation agreements - programs at a lower level which have formal arrangements with one or more programs in the same field, but at a higher level. These arrangements specify that graduates of the lower level program may enter the higher level program without loss of credit.

9. Proficiency and equivalency testing - the use of examinations to demonstrate competence in basic skill areas. This would include examinations designed for persons with little or no formal training in a given field, as well as those designed for persons with formal training in a related field. Unlike advanced standing examinations, these tests generally are used to waive prerequisites required for admission to a program rather than replacing formal course work.

10. Advanced standing examinations - the use of examinations to demonstrate prior knowledge and competence in basic or advanced skill areas. These exams differ from proficiency or equivalency exams in that they may replace formal course work by means of a procedure similar to that whereby high school graduates may "test out" of certain college courses.

11. Curriculum standardization - the standardizing of courses and programs across the state to facilitate transfer as well as upward and lateral mobility.

The preceding is not intended to be an exhaustive listing, but rather a general review of potentially useful career mobility conceptualizations.

Traditionally, all academic programs, as well as the earliest recognized health care professions, planned curricula around a broad-based general education, with professional level courses at upper-division levels of the program or degree. Most allied health education does not readily conform to this general, widely accepted design.

Non-Traditional Programs

To provide more accessible career mobility programs, the educational delivery system may accomplish these purposes more effectively by moving at times out of traditional educational settings into off-campus locations and by offering courses at hours and on days more convenient to the students. Carefully designed and monitored curricula and courses may be as effectively offered outside the traditional setting if an institutional commitment is made to maintaining quality standards of instruction and resources. Objective evaluation is more difficult but just as essential for non-traditional programs designed for career mobility as it is for more traditional, on-campus programs. In each instance, the value of the program will depend upon the quality of the faculty, teaching resources, and clinical facilities.

Practical Necessity

Career mobility is a practical necessity for health care practitioners. If practitioners are to provide services at a consistent and optimum level, they should be able to realize rewards in the form of career and/or economic advancement resulting from additional educational efforts. When career mobility is impossible, the entire health industry suffers. A lack of upward mobility may result in negative work attitudes, retention of employees may

be difficult, or skilled workers may move to other settings where pay for the same job is greater. Morale may be low among those employees who see themselves as occupying "dead-end" positions with no opportunity for career mobility. Patients often suffer from these circumstances, if quality of care is low, while costs are high. It should be noted that the availability of career mobility programs seems to increase employee satisfaction by providing future options, even though not all employees will participate; the feeling of being locked into a position is reduced.

Movement in the direction of planning career mobility and far-reaching decisions for progress can best be made by the Coordinating Board and the Texas Education Agency since these agencies are ultimately responsible for the directions of public postsecondary allied health education throughout the state.

Recommendations

To facilitate the process of providing career mobility in allied health fields, the following recommendations are made.

1. Career mobility should be emphasized in planning all allied health degree programs. Specific career mobility objectives should be stated before approval of any new programs. In addition, criteria of planning for career mobility should be used in evaluating existing programs. The educational process should emphasize appropriate competency-based educational concepts.

   1.1 A main feature of career mobility should be development of broad-based degrees, with related program specializations being developed as majors within the broad degree, rather than as

distinctly separate degrees. In the planning of curricula for the various majors or "tracks," a task analysis system might be utilized to correlate levels within the curriculum with proficiency of specific performance criteria. Task analysis studies similar to those conducted for the Office of Naval Research, or the University of California at Los Angeles might be helpful in this regard.

1.2 A vital component of career mobility should be common sets and subsets of knowledge for as many programs as possible. The common sets and subsets of knowledge necessary for students entering allied health programs should be identified and standardized as much as possible throughout the educational programs of the state. These areas would require the coordination of institutional departments to ensure that courses meet the needs of the allied health programs they serve.

Common curriculum areas would facilitate mobility in at least two ways. Students could transfer into similar programs in other institutions, thus providing geographic mobility, and they also could change tracks or careers without repetition of content in related health career programs, thus providing lateral mobility.

2. The following educational pathway is outlined as best suited to maximizing career mobility. Other pathways are equally acceptable in certain cases, and, indeed, exist in various allied health fields and training settings. For example, in a number of programs, two years of

liberal arts are followed by two years of technical or professional training in a health science center or a senior college. However, general recognition of a multi-level program as described below would greatly facilitate career mobility.

2.1 The certificate level, below the associate degree, should provide basic marketable skills and job entry proficiencies. The work activities of this level are narrowly skilled and usually involve a greater emphasis on psychomotor rather than cognitive aspects. The length of the programs is usually less than two years.

2.2 The associate degree should provide competency in most allied health technology programs. This level usually consists of a balance between psychomotor and cognitive skills. In some fields, supervisory and management skills are included.

2.3 The baccalaureate degree should provide more theoretical preparation as well as supervisory or leadership training. This usually is the minimum level for those who serve as teachers. Baccalaureate programs, where possible and appropriate, should build upon associate degree and/or certificate programs.

2.4 Master's level programs would provide advanced competencies beyond the baccalaureate level in such areas as education, research, administration, and clinical practice as needed to maintain an adequate supply of competent individuals to carry out functions in these areas.

2.5 Doctoral level programs would provide opportunities for that limited number of persons who are qualified to develop advanced competencies in research, planning, educational, and supervisory activities as needed to maintain an adequate supply of competent individuals to carry out functions in these areas.

3. Institutions, on a selective basis, should be permitted to provide academically sound course offerings at times and sites that would accommodate students who could not otherwise participate in such educational offerings under conventional circumstances. Various types of innovative, academically sound educational programs may sometimes be desirable to accommodate students employed full time in health occupations who desire greater career mobility. Many potential students in remote areas of the state lack access to traditional programs, and under certain circumstances, off-campus programs could be permitted to meet the needs of those students.

Of prime importance to the development of such a program is the continual monitoring of quality. The parent institution must be in the position to maintain careful controls over all aspects of the program, including direct responsibility for the clinical courses in health care facilities. Only those institutions with specific ability in allied health education and with a commitment to evaluate quality of off-campus activities in terms of faculty, library and other resources, and clinical affiliations should be permitted to develop such programs.

4. Multiple entry-exit programs, including but not restricted to those that already have been developed and approved by the Coordinating Board, should be expanded and/or implemented. These programs should provide for

equivalency and competency examinations to facilitate entry into programs at various levels. Persons with military training, professionals changing career areas, personnel with extensive on-the-job training would be allowed to demonstrate knowledge and proficiency by mechanisms such as advanced standing examination. Persons with training in the same field, but at a lower level, could possibly challenge course work via advanced placement examinations. This should result in a savings of money and time, since the repetition of training would be avoided in many instances. The use of various mechanisms for entry into these programs at various levels should serve as a means to encourage students to enter programs rather than as means to screen them out.

CHAPTER V

ACCREDITATION

Accreditation is formal recognition that an institution, agency, or program has met certain applicable academic standards "within the context of the institution's or program's statement of its own scope and purposes and as compared with similar institutions or programs."

In the United States formal application of academic standards began in 1787, when the New York legislature directed the Board of Regents of the University of the State of New York "to visit every college in the State annually." Between 1885 and 1924, six regional associations were formed to monitor high schools preparing students for admission to colleges and universities:

New England Association of Schools and Colleges (1885)
North Central Association of Colleges and Schools (1895)
Southern Association of Colleges and Schools (1895)
Middle States Association of Colleges and Secondary Schools (1889)
Northwest Association of Schools and Colleges (1917)
Western Association of Schools and Colleges (1924)

Similarly, efforts to elevate standards in the health field began in 1908, when Dr. Abraham Flexner conducted a two-year study of medical education under the auspices of the Carnegie Foundation for the Advancement of Teaching. Flexner's findings resulted in a major and continuing effort to upgrade medical school standards under the joint auspices of the American Medical Association and the Association of American Medical Colleges.

In 1933, the American Medical Association gradually began to assume responsibility for the accreditation of allied health education programs.

By 1962, seven allied health disciplines (medical technology, physical therapy, medical record administrators, radiologic technology, medical record technician, cytotechnology, respiratory therapy, and laboratory assistant) were "collaborating" with AMA regarding program accreditation; from 1967 to date, eighteen additional allied health disciplines have been added to the list.

During this same period, the lack of an organized national mechanism for monitoring or controlling accreditation resulted in the establishment of a number of rival accrediting agencies (such as those in practical nursing and clinical laboratory sciences) as well as extensive and widespread program proliferation. The latter events continue to cause extensive and widespread public and professional concern.

One's initial impulse to "throw the rascals out" is dampened by the reality that documentation of accreditation is a significant factor in the recruitment of students and faculty and eligibility for federal and private funding, as well as presumed assurance that a program or institution has met certain minimal academic standards. However, belief in the potential value and benefits of the accreditation process does not lessen the need for objective recognition and resolution of the factors currently limiting its effectiveness.

The larger task of reordering and managing the accreditation process rests, in good measure, with the faculty and administration of the academic institutions housing programs requiring accreditation approval. Only an organized inter-intrainstitutional effort is likely to be able to eliminate the current flaws and frustrations currently attributed to the accreditation process.

Recommendations

1. The problems associated with the proliferation and unrealistic standards of accrediting bodies for allied health education programs should be addressed by the Coordinating Board. Appropriate action should be taken to establish a statewide position within Texas, make recommendations, and share the state's position with other states and with national accreditation agencies.

   1.1 The Coordinating Board should sponsor a statewide meeting of representatives from institutions involved in offering or supporting allied health education requiring evaluation by professional accreditation bodies for the purpose of identifying a priority list of statewide accreditation related concerns.

   1.2 The Coordinating Board should develop ways and means of establishing channels of constructive communication with national accrediting agencies regarding resolution of these issues.

CHAPTER VI

CONTINUING EDUCATION AND RETRAINING

Much of the proliferation of programs and the lack of career mobility in allied health disciplines has resulted from the increased sophistication of technology in the health field. Employers have demanded health professionals with the knowledge and skill to utilize new technology to the benefit of the consumer. The need is two-fold: increased numbers of health professionals, and health professionals with appropriate technological backgrounds.

To provide the means to address these needs, one approach has been to develop educational disciplines in the new technologies. Another has been to develop new degree or certificate programs within existing technologies.

Two other approaches, however, have distinct advantages: continuing educational and/or retraining programs.

Participation in continuing education provides opportunities for health professionals to keep abreast of innovations and developments in their fields, to maintain and improve performance, to meet specific practice needs, enhance personal and professional interests, and achieve long-range goals. Health professionals want, and some are being required, to participate in continuing education to maintain competence. While participation alone does not guarantee continued competence, its value to that end is accepted. The importance of continuing education is increasing in allied health education, not only to improve practice, but to provide alternatives to problems of program proliferation and career mobility.

Brief comments on the scope and issues of continuing education will

demonstrate its impact on allied health education and suggest directions which will best serve the educational and health care delivery systems of Texas.

Definition

Continuing education includes systematic, organized learning opportunities beyond basic professional education. It can include informal and short courses, conferences, conventions, seminars, symposia, institutes, workshops, and the like. Formal academic course work may be included, although the functions of formal education and continuing education are different. Continuing education does not usually carry academic credit. The focus is on planned learning, with stated, measurable objectives, rather than the general educational experiences in which most active practitioners participate (i.e., rounds, clinical conferences, reading professional journals, and so on).

Settings and Sponsorship

Because continuing education is important to effective, efficient health care delivery, the allied health education system must accept greater responsibility to provide high quality continuing education opportunities, and for the continued study of this component of allied health education.

The level of responsibility an individual educational institution should accept, or be requested to accept, should be based on the institutional mission, role and scope, location, size, source of support, and faculty and facility resources. Continuing education activities must be consistent with objectives of the institution. An institution with basic programs in a health field should, then, accept responsibility for providing continuing education programs for those practitioners. Thus, community colleges and

senior institutions with modest numbers of programs and resources would provide continuing education programs. Institutions with more programs and resources, with greater access to practitioners, with continuing education organizations and staff not only would provide programs, but also would be expected to assess the need for programs, provide extensive updating and retraining, encourage and conduct research, and disseminate information to all institutions concerned with health professional inservice and continuing education. These larger institutions should also provide the continuing education programs designed to improve competency in allied health education, supervision, management, and research.

Continuing education in allied health, for the most part, should be sponsored and conducted by educational institutions, although employing agencies -- mainly hospitals -- will continue to provide some continuing education programs. The primary focus of educational institutions on teaching allied health content and practice provides the rationale for this recommendation.

Further advantages of the educational institution setting for continuing education activities are improved access to programs based on local needs, as well as lower cost. Barriers to participation, such as distance to programs, resultant time away from work, high costs, and varying levels of relevance to the participant's actual practice, would be reduced.

Of all programs within educational institutions, continuing education is perhaps the area in which more reliance should be on involvement of participant/consumer groups, and cooperative relationships with the broad community. Individuals, employers, consumers, licensing bodies, professional associations, and appropriate regulatory agencies should be included in assessing educational needs and desires of participants, planning, and

evaluating programs. It is essential for the focus to be on the needs of the discipline and its practitioners, and that health care delivery settings are involved.

Standards for Assuring Quality

Educationally sound principles and traditions which are basic to quality academic programs should guide continuing education. Flexibility and innovation are encouraged. The employed participant is often highly motivated to learn but resistant to programs which are irrelevant, patronizing, or poorly presented.

Quality programs will be characterized by relevance to current practice, inclusion of knowledge along with the skills, attitudes and values needed for competent practice, integration of appropriate research and its application to practice, and a comprehensive evaluation.

The standards of quality need to be applied to continuing education courses offered by out-of-state institutions as well as to those offered by out-of-state institutions offering credit courses and/or degrees in Texas. However, any out-of-state college or university may offer non-credit courses in Texas without notifying any state agency or nearby institution of higher education. In most subject areas, the purpose of continuing education is to fulfill personal objectives. Therefore, the prevailing continuing education philosophy that "the customer (student) pays the piper and therefore calls the tune" may be a matter of discussion among educators. However, in allied health fields, continuing education is used to satisfy hospital and board requirements. Quality controls and standards must be present and verifiable. It is this committee's judgment that the Coordinating Board should register, review, and develop standards for out-of-state institutions' proposed continuing education offerings in allied health.

Interdisciplinary Approach

An interdisciplinary approach is encouraged in planning, conducting, and evaluating continuing education activities. Coordination of health care delivery should be improved. Continuing education programs could bring health care disciplines together for broader learning experiences which could improve practice and, thus, services to consumers. In spite of problems in achieving interdisciplinary approaches to health education, such efforts would facilitate a coordinated approach to delivery of improved health care services and should be strongly encouraged whenever appropriate.

Faculty

Faculty are perhaps the most important resource in providing quality continuing education. Only fully qualified faculty members who can adapt materials to practicing allied health professionals' needs should be responsible for the programs. Faculty assignments to continuing education, their supervision, remuneration, and evaluation must continue to be the responsibility of the provider.

Evaluation of continuing education participants and programs should be multidimensional and should include the measurement of changes which have occurred in practice. While paper-and-pencil tests are most often used to evaluate continuing education, evaluation of affective change, direct observations of behavior in practice, and indirect measures of change should be more widely used. Comprehensive evaluation should be part of ongoing research into the impact of continuing education on practice and on all of allied health education. Innovation and experimentation are encouraged.

Accreditation

Accreditation is suggested by some authorities as a means of assuring quality programs. Accreditation is a powerful mechanism to assure that certain standards are met, but the present concern with proliferation of allied health accreditation, the costs, and persistent questions about validity lead to the conclusion that allied health groups should move with caution to continuing education accreditation.

Tie to Licensure

Participation in continuing education activities has been required by law in some states as a condition of license renewal. The assumption has apparently been made that continuing education assures continued competency. There is an increasing demand by health professionals and consumers for greater professional accountability, but the means to this end are less clear. Obviously research is needed on the relationships between continuing education and changes in practice, and on other approaches to continued competency.

Recognition and Recording Participation

The individual and the professional association share responsibility for recognizing participation in continuing education. There is a trend to use the continuing education unit, or CEU, as the standard currency. The National University Extension Association has defined the CEU as "ten contact hours of participation in an organized continuing education experience under responsible sponsorship, capable of direction and qualified instruction." Over 100 institutions have adopted the CEU, and maintain a recording system for individual participants.

Funding

Long-term, reasonably stable sources of financial support for continuing education activities are important. Community colleges have received financial support from the Texas Education Agency following specific guidelines. Texas public senior educational institutions fund continuing education activities from multiple sources, but instability of sources presents problems.

Since it is recommended that educational institutions providing basic allied health education programs be charged with the responsibility for providing needed continuing education, it is also recommended that funds be provided to pay part of the cost of these programs.

Individuals, and possibly employers, should support the basic instructional costs of continuing education, but a solid, steady financial base is needed to support administration and for research and development activities which are suggested for senior institutions.

Continuity and Coordination

A final issue is the need for continuity and coordination of these activities. Systematic information on needs of practitioners, on available continuing education programs, on resources to meet the needs of practitioners, and for evaluation of these activities is important.

No recommendation is being made for a coordinating organization, but consideration might be given to the feasibility of coordinating clearing houses. The Southern Regional Education Board serves as a continuing education coordinating center for the southern states. Consideration could be given to similar coordination on a regional, institutional, or discipline basis, involving professional associations, state agencies, individual

delivery organizations, employers, individuals, and various regulatory groups. Functions could include gathering systematic information, developing and enforcing standards for quality programs, and working to avoid duplication and gaps in continuing education.

Retraining

Retraining of allied health professionals to reduce program proliferation and enhance career mobility is addressed separately because it overlaps but is not synonymous with continuing education.

Health care providers must possess current skills and knowledge, so education must be a lifelong affair. Retraining is a part of this continuing process when substantial new information and skills are needed.

Retraining may be needed for those who choose to redirect their focus of practice to change or enter a specialty area, to increase job satisfaction, to upgrade specific skills, or to enter practice after a period of inactivity. Employers may ask practitioners to obtain certain new skills and knowledge to allow safe practice in expanded and extended roles. The lateral movement of allied health professionals is expressly prohibited by some licensing laws, yet in reality, there are (perhaps increasing) needs for persons who can perform several tasks, especially in areas where serious shortages of health personnel exist.

"Professional fragmentation" could be reduced by retraining or by providing skills in another discipline, rather than by training a worker to perform small parts of a wide variety of functions. Examples are the medical technologist who is taught to take radiographs and the vocational nurse who gives respiratory therapy.

Retraining is required for those who wish to return to the practice of their disciplines after a period of inactivity. If health providers

in some states fail to meet certain active practice criteria, their licenses are withdrawn. For instance, a health provider may be required to work a specified period of time during the year or to participate in specific continuing education activities in order to maintain licensure. To reactivate the license to practice, the individual must complete specific retraining activities.

Continuing Education Not Enough

Retraining will be required, necessary, or desirable in these and perhaps other instances. Continuing education programs alone will not assure competency. Appropriate groups should be included in recommending action and setting guidelines for retraining programs.

It is recommended that senior educational institutions -- in cooperation with basic educational programs, employers, professional groups, current practitioners and regulatory agencies -- develop (1) methods to diagnose the learning needs of those seeking retraining; (2) appropriate learning opportunities to meet these needs (inservice education, continuing education programs, formal course work, etc.); (3) guidelines to assure the coordination of these functions; and (4) methods to evaluate the individual's performance. These materials should be disseminated to all institutions which might be involved in providing retraining.

The retraining experience should provide for both classroom and clinical practice to document the individual's ability to safely apply basic and new knowledge and skills in actual practice.

Continued Study

There is an urgent need for continued study of the various mechanisms which could facilitate the improvement of continuing education for allied

health practitioners. Among the areas for study in continuing education are content of programs, format and delivery mechanisms which enhance participation, learning and application of content to actual practice, and the outcomes of and barriers to participation.

Recommendations

Continuing education and retraining are increasingly important aspects of allied health education. Educational institutions must accept more responsibility for providing such programs, with an emphasis on consistently high quality. To accomplish this, the following recommendations are offered:

1. Educational institutions approved for basic allied health education programs should assume the major responsibility for providing continuing education programs for practitioners in those fields.

   1.1 In general, community colleges and senior institutions with modest resources should provide programs.

   1.2 Institutions with more resources and programs should provide programs; conduct or sponsor research; provide leadership in improving the quality of programs; conduct or sponsor surveys of continuing education practice needs and desires of allied health personnel; establish basic guidelines for retraining; disseminate general information about the improvement of allied health basic and continuing education.

2. Educational institutions providing continuing education programs should be encouraged to adopt the National University Extension Association definition of continuing education units (CEU) as the

mechanism for giving recognition of participation. Institutions providing continuing education should maintain accurate student records of such units earned.

3. Standards should be applied to assure quality continuing education programs. Approval of educational institutions to provide continuing education should be based on documentation that standards are met. Broadly based representative groups should determine and monitor these standards through advisory committees or other mechanisms.

4. Stable sources of state funds should be developed to share the costs of continuing education and retraining programs.

5. The Coordinating Board should develop a process of registration and review and should set standards for out-of-state institutions' proposed continuing education offerings in allied health.

APPENDICES

Appendix A

GLOSSARY

Accreditation

The process by which educational programs are evaluated and recognized in terms of predetermined criteria and standards for facilities, faculty, and curricula. Most health professions programs are subject to specialized accreditation which focuses on a specific curriculum and/or department and is aimed at assuring quality in a program thereby protecting the public against professional incompetence.

Affiliation Agreements

In allied health education, formal agreements between an educational institution and a clinical facility, such as a community hospital, for the purpose of providing adequate clinical resources necessary for the training of an allied health professional.

Allied Health

Professional, technical, and supportive fields of patient care, public health, and health research to support, complement, or supplement the professional functions of physicians, dentists, and other health practitioners. For purposes of this study, registered nurses and licensed vocational nurses were excluded.

Articulation

In curriculum and program development, a structure designed to fit into an advanced curriculum or program of related nature. An example would be associate degree medical laboratory technician programs from which a student can progress to the baccalaureate medical technology program.

Career Mobility

In allied health education, opportunities provided by programs or training for a health professional to move up the career ladder or into a different field of allied health at the same level.

Clinical Education

The portion of the curriculum carried out in a clinical setting (e.g., hospital, clinic, etc.) in which direct patient care and/or the provision of health care in an organized system play a major role.

Competency-based Education

In general, includes an extensive and inclusive inventory of tasks to be performed or skills to be acquired, and subsequent design of an educational

or training program to ensure the accomplishment of these goals. Often, this approach in allied health education is applied to skill development rather than the acquisition of basic academic knowledge. It involves evaluation mechanisms and often is offered on a self-paced, self-instructional system of programmed education.

Continuing Education

Planned learning experiences beyond a basic allied health education (usually not carrying academic credit) designed to promote the development of knowledge, skills, and attitudes to enhance allied health practice.

Continuing Education Unit (CEU)

Defined by the National University Extension Association as "ten contact hours of participation in an organized continuing education experience under responsible sponsorship, capable of direction and qualified instruction."

Credentialing

Process by which individuals, who may or may not have completed formal educational programs, are determined to have fulfilled established criteria and standards of performance. It may be achieved by several mechanisms: licensure, registry, certification, and academic certificates and degrees.

Degree Program

A grouping of subject matter courses with separate discipline identification which characterizes and distinguishes the major program of study leading to a degree at a particular level. Institutions may refer to these groupings in different ways, such as "major," "option," "concentration," "major emphasis," or other nomenclature.

Didactic Education

The portion of the curriculum consisting of lectures and laboratory training in the academic setting.

Discipline

In allied health education, a field of study which prepares students for a specific occupation requiring prescribed knowledge and skills.

Multidisciplinary Program

Refers in this report to a program designed to provide training for a health professional in multiple health disciplines in a single curriculum.

Multiple Entry-Exit Program

In allied health education, provides two or more distinct levels of training for a health professional, with multiple entry and exit points, to assure upward career mobility building upon the basic job-entry level training.

Need

In this report, a function of the present and projected personnel requirements of the health care establishment in Texas and, as such, provides the major rationale for additional allied health programs and disciplines.

Practicum

A formal course in which objectives relate to the opportunity for the student to apply knowledge to and practice in the actual work setting. Such a course requires clinical experience. It includes identifiable clinical supervisors and a uniform and in-depth procedure for evaluating student progress.

Role Delineation

A statement which specifies the essential functions of an occupation, identifies the knowledge and skills required for competent practice, and outlines the responsibilities and authority of a given allied health profession.

Task Analyses

The reduction of a variety of tasks to factors, which can be clustered into groups according to measurable similarities in the competencies required to perform the tasks. The use of these analyses (or inventories) provides a more objective means for improving the utilization of existing health personnel by relying on uniform definitions and measurable units of learning required for mastery.

Appendix B

PROPOSED PROCESS FOR REVIEW

OF ALLIED HEALTH EDUCATION PROPOSALS

Background

The Coordinating Board has statutory responsibility for reviewing and acting on requests from senior colleges, universities, and health science centers for authorization of new allied health education programs.

The Coordinating Board procedure for making these decisions is based on the established process used in the review of all academic programs. The unusual nature of allied health education, however, calls for a modification of that procedure to include standards applicable specifically to allied health training, which for the most part is more technical, more job-oriented, and more closely tied to training in clinical facilities than is general academic education.

It is recommended that the Coordinating Board's present process be expanded to address those particular elements of allied health education, including supply and demand of allied health personnel, clinical facilities available for training purposes, opportunities afforded for career mobility, and the institutional capacity for developing highly technical programs, in addition to the established criteria for other degree and certificate programs. The Board should adopt standards to be used specifically for the measurement of allied health education proposals, applying objective, uniform criteria for all proposals, as well as differential criteria for particular program areas where necessary.

The proposal process for considering these special aspects of allied health education should be as rigorous and thoroughgoing as the existing

process. The expanded review should complement but go beyond such basic questions as the following:

- What is the need for graduates of the proposed program, and is the proposed program necessary to fill, in whole or in part, that need?
- What resources and capabilities are required to mount the program and maintain it, and does the proposing institution have available these resources and capabilities, or access to them?
- What priority has the proposing institution assigned to its proposal in terms of the institution's needs and available resources?

The Board should continue to assign priority to a proposal in terms of, among others:

- The extent to which the trained personnel produced by the program meet the defined need.
- The extent to which existing programs do not satisfy such need.
- State funds needed and available to support the proposed program.

These three issues are of particular importance in the evaluation of job-oriented allied health fields. More emphasis must be placed on the available job market in allied health program review than in review of general academic or liberal arts programs not directly related to a specific career.

Recommended Action

An essential first step in the expansion of the present program review procedures for allied health is the establishment of a permanent Allied Health Education Advisory Committee. It is recommended that such a committee be appointed by the Commissioner of Higher Education. The committee should consist of 10 to 15 members, representative of the clusters of related allied health specialties. A majority of the members should be directly in charge

of educational programs. The balance of the committee should include experts from the health care industry who are knowledgeable about allied health issues. The committee would be advisory in nature, with review and comment functions.

It is recommended that the committee, among its functions, should:

1. Review and comment on criteria, developed by the Coordinating Board staff, to be used in the measurement of all proposed allied health programs, and on standards to determine compliance with those criteria.

2. Provide advice, counsel, and written comments to the Coordinating Board staff on matters related to evaluation of program proposals.

3. Compile a list of expert consultants in each recognized allied health discipline, selected for their experience in conducting needs assessments and evaluations of institutional capability to establish and maintain programs in the specialties in which they are expert, and advising decision-makers thereon. The consultant list shoud include:
   - Position title, address, and telephone number.
   - Credentials on training and work experience in the discipline and in the consultant role.
   - References from decision-makers who have used the person as a consultant.

4. Review and provide information to the Commissioner on major issues in allied health education.

5. Recommend to the Commissioner the establishment, as needed, of task forces, drawn from the specialty area under consideration to conduct special studies or provide expertise not otherwise available in connection with Advisory Committee functions.

Appendix C

EXAMPLE OF AN INVENTORY FOR ALLIED HEALTH PROGRAMS

When health disciplines are reduced to factors, the components can be clustered into groups according to measurable similarities in the competencies required to perform them. An inventory of such groups is an approach to the handling of the problem of increasing specializations.

In the following example, a number of disciplines have been grouped by "family." The first list in each family is made up of those professions requiring basic education for preparation to function as a health professional. The second list is comprised of those professionals for whom certifications are available or provided beyond the initial education without additional degrees being awarded.

These health professions "clusters" are intended to serve as an example of the type of inventory that should be developed further.

CLINICAL LABORATORY SERVICES

Basic Education

Clinical Laboratory Assistant (CLA)
Medical Laboratory Technician (MLT)
Medical Technologist (MT)

Certifications

Bacteriology Technologist
Blood Bank Technician/Technologist
Cytotechnologist/Cytotechnician
Hematology Technician/Technologist
Histologic Technician/Technologist
Renal Dialysis Technician/Technologist
Biochemistry Technician/Technologist
Tissue Technologist
Urinalysis Technician
Medical Bacteriologist
Venatech
Morgue Attendant

DENTAL SERVICES

Basic Education

Dental Assistant
Dental Hygienist
Dental Laboratory Technician

Certifications

Prophylactician
Dental Technician

PHYSICAL MEDICINE AND REHABILITATION SERVICES

Basic Education

Mental Health Associate
Occupational Therapist
Occupational Therapy Assistant
Physiatrist
Social Worker
Speech Therapist
Physical Therapist (Physiotherapist)
Physical Therapy Assistant

Certifications

Audiologist
Audiometrist
Speech Clinician
Speech Pathologist
Recreation Therapist
Psychiatric Social Worker
Music Therapist
Corrective Therapist
Education Therapist
Manual-Arts Therapist
Medical Social Worker
Prosthetist-Orthotist

RADIOLOGIC SERVICES

Basic Education

Radiologic Technician
Radiologic Technologist
Health Physicist

Certifications

Nuclear Laboratory Technician/Technologist
Nuclear Medical Technician/Technologist
Thermograph Technician
Cobalt Technician
Hyperbaric Chamber Technician
Radiotherapy Technician
Therapy Technologist
Magna Scanner Technician/Technologist
SpectrometerTechnician/Technologist
Radioisotope Technician/Technologist
Cath Lab Technician/Technologist
Health Physics Technician/Technologist

RESPIRATORY THERAPY SERVICES

Basic Education

Respiratory (Oxygen) (Pulmonary-Function) Therapy Technician
Anesthesiologist
Respiratory Therapist

Certifications

Cardiopulmonary Technician
Electroencephalograph (EEG) Technician
Electrocardiography (EKG) Technician